CLAIMS

WHAT IS CLAIMED:

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1. A configurable storage array, comprising:

a backplane;

a plurality of storage devices coupled to the backplane;

a segmentable bus coupled to the storage devices;

a plurality of input/output connectors coupled to the segmentable bus; and

a control board including control logic adapted to determine an arrangement of connectors coupled to the input/output connectors and configure the segmentable bus to define a plurality of storage device arrays based on the arrangement.

2. The configurable storage array of claim 1, wherein the control logic is adapted to determine the arrangement of connectors and configure the segmentable bus upon power up of the configurable storage array.

3. The configurable storage array of claim 1, wherein the control board includes a reconfiguration switch, and the control logic is adapted to determine the arrangement of connectors and configure the segmentable bus upon activation of the reconfiguration switch.

4. The configurable storage array of claim 1, wherein the control board includes a plurality of expanders separating portions of the segmentable bus.

5. The configurable storage array of claim 4, wherein the control logic is adapted to selectively activate particular ones of the expanders based on the arrangement of connectors.

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6. The configurable storage array of claim 4, wherein the control logic is adapted to disable one of the expanders on a portion of the segmentable bus upstream of a particular connector and enable any expanders on portions of the segmentable bus downstream of the particular connector until the presence of another connector is determined.

7. The configurable storage array of claim 4, wherein the control logic is adapted to enable the all of the expanders on portions of the segmentable bus downstream of a particular connector in response to only one connector being identified.

8. The configurable storage array of claim 1, further comprising a plurality of expanders coupled between the segmentable bus and the input/output connectors.

9. The configurable storage array of claim 1, wherein the storage devices comprise tape drives.

10. The configurable storage array of claim 1, wherein the storage devices comprise hard disk drives.

11. The configurable storage array of claim 1, wherein the storage devices are hot-plug.

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12. The configurable storage array of claim 1, wherein the control logic is adapted to determine the arrangement of connectors by monitoring the voltage state of a particular line in the input/output connectors.

13. The configurable storage array of claim 1, further comprising a plurality of switches associated with the input/output connectors, wherein a first subset of the switches is enabled in response to a connector being attached to the associated input/output connectors, a second subset of the switches is disabled in response to a connector not being attached to the associated input/output connectors, and the control logic is adapted to determine the arrangement of connectors by monitoring the states of the first and second subsets of the switches.

14. The configurable storage array of claim 1, wherein the segmentable bus comprises a small computer system interface (SCSI) bus.

15. A method for configuring a storage array having a plurality of storage devices, comprising:

determining an arrangement of connectors coupled to input/output connectors of the configuring a storage array; and

grouping subsets of the storage devices onto isolated bus segments in the storage array based on the arrangement of connectors.

16. The method of claim 15, wherein the storage array includes a bus coupled to the storage devices, and grouping the subsets comprises segmenting the bus to define the isolated bus segments.

17. The method of claim 15, wherein determining the arrangement of connectors and grouping the subsets of the storage devices comprises determining the arrangement of connectors and grouping the subsets of the storage devices upon power up of the storage array.

18. The method of claim 15, wherein determining the arrangement of connectors and grouping the subsets of the storage devices comprises determining the arrangement of connectors and grouping the subsets of the storage devices in response to the activation of a reconfiguration switch on the storage array.

19. The method of claim 16, wherein segmenting the bus includes selectively enabling and disabling ones of a plurality of expanders separating portions of the bus.

20. The method of claim 19, wherein selectively enabling and disabling ones of the plurality of expanders comprises disabling one of the expanders on a portion of the bus upstream of a particular connector and enabling any expanders on portions of the bus downstream of the particular connector until the presence of another connector is determined.

21. The method of claim 19, selectively enabling and disabling ones of the plurality of expanders comprises enabling the all of the expanders on portions of the segmentable bus downstream of a particular connector in response to only one connector being identified.

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22. The method of claim 16, further comprising enabling a plurality of expanders coupled between the bus and the input/output connectors.

23. The method of claim 15, wherein determining the arrangement of connectors comprises monitoring the voltage state of a particular line in the input/output connectors.

24. The method of claim 15, wherein the storage array further includes a plurality of switches associated with the input/output connectors, a first subset of the switches being enabled in response to a connector being attached to the associated input/output connectors, a second subset of the switches is disabled in response to a connector not being attached to the associated input/output connectors, and wherein determining the arrangement of connectors comprises monitoring the states of the first and second subsets of the switches.

25. An apparatus, comprising:

a storage array having a plurality of storage devices;

means for determining an arrangement of connectors coupled to input/output connectors of the configuring a storage array; and

means for grouping subsets of the storage devices onto isolated bus segments in the storage array based on the arrangement of connectors.